REMARKS

In response to the Office Action mailed March 24, 2006, Applicant respectfully requests reconsideration. Claims 1-10 were previously pending in this application, with claims 1-6 being withdrawn from consideration. Claims 7 and 9 have been amended herein. New claims 11-17 have been added to more fully define Applicant's contribution to the art. As a result, claims 7-17 are pending for examination with claims 7, 9 and 11 being independent. No new matter has been added.

Rejections under 35 U.S.C. §102

The Office Action rejected claims 7 and 9 under 35 U.S.C. §102(e) as being anticipated by Daubenspeck et al. (6,496,053). Applicant respectfully requests reconsideration.

Daubenspeck describes, for example, in Figures 22 and 23, a fuse structure including a capacitive circuit having a capacitance which is alterable. The upper plate of the capacitor corresponds to the penultimate metallization level (2100). On Figure 22, a pair of metal regions of the penultimate metallization level (2100) have facing edges. A dielectric gap (2102) is provided between the two facing edges. The dielectric gap is left in place when it is desired to isolate the facing edges. The dielectric gap is broken down when it is desired to make the two metal regions contact (Col. 7, lines 62-65). Breaking down of the dielectric gap is obtained by applying a specific voltage field through E-Beams or Ion-Beams.

The Office Action states that region 2100 of Daubenspeck purportedly can be considered as both the "pairs of metal regions of the penultimate metallization level" and the "metal portions of the last metallization level." Applicant respectfully disagrees. Daubenspeck only describes region 2100 as a single metallization level, which is the upper plate 2100 of a capacitor (Col. 8, lines 6-9). However, the Office Action refers to "lower, middle and upper portions" of 2100, which do not appear to be described in Daubenspeck. Applicant respectfully requests clarification as to what the Office Action is referring to as the "lower, middle and upper portions" of 2100. Furthermore, it is unclear how any portion of region 2100 can be the "last metallization level" because Daubenspeck specifically states that layer 2100 is formed in the second-last metallization level. Daubenspeck states: "The fuse 2201 can be seen to be formed

of the upper capacitor place 2100 which also serves as a beam collection target in last metal -1 layer and a lower plate 2101 formed in last metal -2 layer" (Col. 8, lines 10-13).

Regarding the "determined pairs" limitation, the Office Action states: "there is no distinction between covering the facing edges of all pairs of metal regions and those of selected pairs, since the selected pairs can be all the pairs."

By contrast, claim 7 as amended recites: insulating portions covering the edges of the metal regions of determined pairs according to the specific needs, the edges of at least one pair of the metal regions not being covered by the insulating portions. Daubenspeck et al. does not teach or suggest that the edges of at least one pair of the metal regions not being covered by the insulating portions. Therefore, claim 7 patentably distinguishes over Daubenspeck et al. Accordingly, withdrawal of this rejection is respectfully requested.

Claim 8 depends from claim 7 and is therefore patentable for at least the same reasons.

Claim 9, as amended recites: metal portions of the uppermost metallization level which cover the facing edges of the metal regions of all pairs and which connect, for at least one pair of metal regions, the metal regions of the pairs other than the determined pairs. Daubenspeck et al. does not teach or suggest metal portions of the uppermost metallization level which cover the facing edges of the metal regions of all pairs and which connect, for at least one pair of metal regions, the metal regions of the pairs other than the determined pairs. Therefore, claim 9 patentably distinguishes over Daubenspeck et al. Accordingly, withdrawal of this rejection is respectfully requested.

Claim 10 depends from claim 9 and is therefore patentable for at least the same reasons.

New Claims

New claim 11 recites:

> An integrated circuit, comprising:
> pairs of metal regions formed in a metallization level and having facing edges;
> at least one insulating portion covering the facing edges of at least one first pair of the pairs of metal regions so as to encode at least one first bit having a first polarity; and
> metal portions that cover the facing edges and connect at least one second pair of the pairs of metal regions so as to encode at least one second bit having a second polarity, the metal portions being formed in an uppermost metallization level of the integrated circuit.

Claim 11 patentably distinguishes over Daubenspeck et al. because Daubenspeck et al. does not teach or suggest at least one insulating portion covering the facing edges of at least one first pair of the pairs of metal regions so as to encode at least one first bit having a first polarity; and metal portions that cover the facing edges and connect at least one second pair of the pairs of metal regions so as to encode at least one second bit having a second polarity, the metal portions being formed in an uppermost metallization level of the integrated circuit.

Claims 12-17 depend from claim 11 and are therefore patentable for at least the same reasons.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Dated: September 22, 2006

Respectfully submitted,

By: _____

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